Historic, archived document

Do not assume content reflects current scientific knowledge, policies, or practices.

1.967
R2C82

UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL RESEARCH ADMINISTRATION
BUREAU OF ENTOMOLOGY AND PLANT QUARANTINE
WASHINGTON 25, D. C.

In Cooperation with State, Federal and Other Agencies

COTTON INSECT CONDITIONS FOR WEEK ENDING JUNE 4, 1948

(Third Cotton Insect Survey Report for 1948)

Boll weevils are less abundant in the cotton fields of South Carolina, Georgia, Mississippi, and Louisiana than a year ago at this time, but weevils are more numerous than last year in many counties of Texas. Insecticides are now being used in some of these counties for weevil and cotton fleahopper control. Insecticides have also been used in Texas for the control of thrips, beet armyworms, and grasshoppers that have made their appearance in injurious numbers in some areas. In Arizona several thousand acres of cotton have been dusted for beet armyworm control.

BOLL WEEVIL

TEXAS: Boll weevil infestation continues light in most areas of the state. However, in the lower Rio Grande Valley weevils are more numerous at this date than any time since 1945. During the week ending June 4, a total of 2300 squares were examined in 16 fields in Cameron County and all fields were infested with weevils. In 4 fields less than 10% of the squares were punctured; in 7 the infestation ranged from 10% to 25%, and in 5 fields more than 25% of the squares were punctured or an average of 21%for all fields examined as compared to 1% at this date in 1947 and 8% in 1946.

In Wharton County in the Coastal Bend area a total of 5,100 squares were examined in 19 fields. The average infestation was 33% punctured squares ranging from 4% to 82%. All of these fields were located in the Caney Creek and Colorado River bottoms.

A total of 27,100 squares were examined in 215 fields in 17 counties in the Coastal Bend, Lower Rio Grande Valley, and South Texas areas and an average of 15% of the squares were punctured by weevils. In 49 fields no punctures were found; in 81 fields less than 10% of the squares were punctured; in 43 fields from 10 to 25%; in 21 fields from 25%to 50%; and in 21 fields more than 50% of the squares were punctured.

During the week 27 fields of seedling cotton were examined in McLennan and Falls counties and 55 weevils were found on 11,200 terminals or at the rate of 72 weevils per acre. Weevils were found in 17 of the 27 fields examined. In 1947 an average of 32 weevils per acre was found and in 1946 an average of 799 weevils was found. The high population in 1946 was due partly to the concentration of weevils in the early planted cotton which consisted of approximately 25% of the total acreage that year.

One weevil emerged from the hibernation cages at Waco during the week making a total of 11 for the season. The percent emergence at this date for this and previous years and total seasonal survival are shown as follows:

Year	Seasonal survival as of June 3:	Total seasonal survival, percent
1940	0.14	0.2
1941	17.64	21.32
1942	0.715	0.715
1943	0.225	0.225
1944	2.64	2.78
1945	2.94	3.42
1946	1.28	1.32
1947	0.14	0.18
1948	0.22	

LOUISIANA: A total of 53,000 cotton plants were examined in Madison Parish during the week and 387 weevils were found or at an average rate of 131 weevils per acre. Fewer weevils are in the fields at this date than any time since 1944. In the examination of 13 fields in Tensas and Concordia Parishes only two were found infested.

At Tallulah, in northeastern Louisiana, boll weevil emergence in hibernation cages to date indicates that a much smaller percentage of weevils survived the winter and are emerging this spring than anyyear since 1942. A summary of plant examinations and survival of weevils in hibernation cages in Madison Parish are as follows:

May 31 to June 6

Year	Number of Plants Examined	Number of Weevils Found	Number of Weevils Per Acre	Boll Weevil Survival in Hibernation Cages from May 1 to June 4
1948	53,000	387	131	.32
1947	56,000	652	210	1.14
1946	46,000	926	362	7.22
1945	62,000	734	213	8.92
1944	92,200	461	90	1.42
1943	60,000	824	247	.66
1942	76,000	207	49	.06
1941	72,000	1,437	359	10.56
1940	77,000	136	32	.02
1939	59,000	401	122	1.66
1938	50,000	306	110	.64
1937	50,000	128	46	10.90
1936	34,000	29	15	.10
1935	40,000	552	250	.48
1934	15,000	464	563	3.18
1933	36,000	846	419	.36
1932	34,200	897	474	6.06

MISSISSIPPI: Dr. Clay Lyle, Entomologist of the Agricultural Experiment Station and State Plant Board, reported on June 7, as follows:

> "The boll weevil is not as threatening as at this time last year, based on observations made by its inspectors and government entomologists on 312 farms in 40 counties during the past week.

> Weevils were found only on 74 farms with an average of 89 per acre, which compares with 262 per acre on this date last year.
>
> Most of the infestations were in the central part of the State and in hill counties bordering the Delta. Except in Issaquena County, where 6 out of 10 farms had infestations of 50 to 100 weevils, no boll weevils were found in the Delta. The highest infestation was 350 per acre on a Yazoo County farm, but infestations of 100 per acre or higher were found in Attala, Chicasaw, Choctaw, Copiah, Grenada, Issaquena, Jones, Lincoln, Montgomery, Oktibbeha, Warren, and Webster Counties."

During the week entomologists at the Delta Branch Experiment Station at Stoneville, examined 158 cotton fields in 13 Delta Counties including the hill sections of some counties and weevils were found in 21 fields in Issaquena, Warren, and Yazoo counties at the rate of 50 to 350 per acre or an average of 81 weevils for all infested fields. On this date a year ago 66 fields were examined in eight Delta Counties and fifteen fields were infested at an average rate of 283 weevils per acre. In 1946, examinations were made in 93 fields in nine Delta Counties and 19 were found infested at an average rate of 82 weevils per acre.

GEORGIA: Apparently fewer boll weevils than usual survived the past winter in southern Georgia. In the vicinity of Tifton, Tift County, 2 fields were carefully examined; in 1 field less than 0.5% of the squares was punctured and in the other field 2% were punctured. In Crisp County an average of 3% of the squares was punctured in 3 fields examined.

SOUTH CAROLINA: Boll weevil emergence from the hibernation cages at Florence is very low. Only 3 weevils emerged during the week, making a total of 7 for the season. By this date in 1947 a total of 146 weevils had emerged from the cages, and in 1946 a total of 83 had emerged. It is believed that factors other than climatic conditions are responsible for the low survival in 1948.

The emergence of boll weevils into an early planted trap plot increased over the previous week. A total of 89 weevils were collected during the week, making 244 thus far this season. The emergence into the trap plot as compared with previous years through the first week of June follows:

Years	Weevils Collected
1948	244
1947	641
1946	140
1945	377
1944	102
1943	238
1942	175

Square infestation counts were made in 50 fields in 10 counties and weevil punctured squares were found in all fields examined. In 5 fields less than 10% of the squares were punctured; in 31 fields from 11 to 25%; and in 14 fields more than 25% of the squares were punctured. Plant examinations were made in 15 fields in Richland, Lexington, and Berkeley Counties and weevils were found at an average rate of 70 per acre. These findings indicate that sufficient weevils are present in the fields to cause serious injury to the crop unless they are controlled by hot, dry weather or by insecticides.

COTTON FLEAHOPPER

TEXAS: Cotton fleahoppers are transferring from horsemint to cotton over large areas in the southern half of the State and infestations are increasing in damaging numbers in many fields. The average this year is 10 fleahoppers per 100 terminals as compared to 9 a year ago on this date. A total of 13,550 plants were examined in 220 fields in 17 counties in central, coastal, and south Texas areas. In 37 fields no cotton fleahoppers were found; in 119 of the fields less than 10 hoppers per 100 terminal buds were found; in 42 fields from 11 to 25; in 16, from 25 to 50;, and in 6 fields more than 50 cotton fleahoppers per 100 terminals were found. Much dusting for fleahopper control is being done throughout the Coastal area.

COTTON LEAFWORM

Intensive surveys have been made for the cotton leafworm in the Coastal Bend, Lower Rio Grande Valley, and South Texas areas. No leafworms have been found to date. The first cotton leafworms last year were found in Nueces County, on June 21. The cotton leafworm usually makes it appearance in south Texas in April or May but in some years they do not appear until June.

MISCELLANEOUS INSECTS

TEXAS: Thrips continued to cause considerable damage in some fields in the Lower Rio Grande Valley. The damage from this insect has been prolonged more than usual this season.

Heavy infestations of grasshoppers have been reported in marginal and pasture lands in a number of areas and measures have been generally applied for their control. Thus far no reports have been received of damage to cotton.

LOUISIANA: Sweepings were made in seven cotton fields in Madison Parish to determine the populations of the cotton fleahopper, tarnished plant bug and rapid plant bug. Not more than 2 cotton fleahoppers or rapid plant bugs were taken per 100 sweeps at any one point but the tarnished plant bugs ranged from 13 to 51 per 100 sweeps with an average of 30 for the 7 fields. This is believed to be the highest population of tarnished plant bugs in cotton fields in this area over the long period since records have been kept at the Tallulah laboratory.

MISSISSIPPI: Clay Lyle, Entomologist, reported on June 7: "Cotton aphids are numerous in most fields and thrips are causing damage in several sections.

Woolly bear caterpillars driven from meadows and pastures by the drought are attacking cotton in Pontotoc and Oktibbeha Counties."

B. J. Young of the Delta and Pine Land Company, Scott, Bolivar County, reported on June 4, "that very heavy infestations of thrips were present in cotton fields over large areas in Bolivar County. He also reported a few tarnished plant bugs and scattered infestations of aphids but no boll weevils."

Entomologists at the Delta Branch Experiment Station at Stoneville, reported June 4: "Thrips are abundant and damage seems to have increased during the week. Thrips damage was recorded in 98 fields examined, 65 of which were classed as light or moderately damaged and 23 as severely damaged. A few fields were observed where severe thrips injury may have been responsible for the impaired stand of cotton."

GEORGIA: Late in May cutworms were reported causing serious damage to cotton, corn, and peanuts near Quitman, Brooks County, Georgia. About 12 acres in one field had been seriously injured including 1½ acres of cotton that had been completely destroyed and 3 acres seriously damaged so that not over 30% of the stand remained.

The insects involved were identified as the granulate cutworm, Feltia subterranea (F.), the southern grass worm or fall armyworm, Laphygma frugiperda (A. & S.), and another cutworm, Agrotis vetusta (Wlk.).

SOUTH CAROLINA: Thrips are present in most fields but do not seem to be causing much damage.

INSECTS ON IRRIGATED COTTON OF THE SOUTHWEST

ARIZONA: Much dusting with a 5% DDT-sulfur mixture has been done in Deer Valley, Maricopa County for the control of the beet armyworm, with good results. This insect is present in most of the late planted cotton fields in the Salt River Valley. In the Avondale area also several late planted cotton fields are being dusted for beet armyworm control. In the Perryville and Buckeye sections the worms are being controlled by irrigating the fields as soon as the worms are found in damaging numbers. Thrips and darkling beetles have been observed in these areas but the beetles have not become numerous enough to affect the stand. In the Marana area of the Santa Cruz Valley the beet armyworm has become very serious and considerable damage has been done to seedling cotton. Several thousand acres of cotton have been dusted with a 5% DDT - 75% sulfur mixture for their control. Good control has been secured in all fields observed. The worms are threatening in the Sahuarita area south of Tucson.

TEXAS: Thrips injury to cotton was unusually severe in the El Paso Valley this season. Observations made during the past week indicate that the damage is disappearing. No reports of the beet armyworm in the Valley were received. The weekly sweeping records indicate that injurious hemipterous cotton insects are less numerous than at this time last year.

PREPARED June 11, 1948

Correction: Date of preparation of last week's report should have been June 4 instead of May 4.